

AMENDMENTS TO THE CLAIMS

The following is a complete, marked-up listing of revised claims with a status identifier in parenthesis, underlined text indicating insertions, and strike through and/or double-bracketed text indicating deletions.

LISTING OF CLAIMS

1-19. (Canceled)

20. (Currently amended) A ~~recording~~ computer-readable medium having a data structure for managing reproduction of menu data, comprising:

a video data storing area one or more playback units of video data;

a menu data area storing menu data comprising one or more thumbnail pictures corresponding to each playback units, ~~together and~~ each thumbnail picture stored as a block of menu data on the computer-readable medium; and

a menu management area storing menu management information, the menu management information providing an index to menu data,

wherein at least one thumbnail picture in the menu data is reproduced based on the menu management information.

21. (Canceled)

22. (Currently Amended) The ~~recording~~ computer-readable medium of claim 20, wherein the menu data area records padding data between at least two of the blocks of menu data.

23-24. (Canceled)

25. (Currently Amended) The ~~recording~~ computer-readable medium of claim 20, wherein the menu management information indicates a number of the thumbnail pictures stored in the menu data area.

26. (Currently Amended) The ~~recording~~ computer-readable medium of claim 25, wherein the menu management information provides a starting address and ending address of each block of menu data, and a number of starting and ending address pairs indicates the number of the thumbnail pictures stored in the menu data area.

27. (Currently Amended) The ~~recording~~ computer-readable medium of claim 20, wherein the index to a thumbnail picture is a starting address of the block of menu data for the thumbnail picture in the menu data area.

28-29. (Canceled)

30. (Currently Amended) A method of reproducing menu data recorded on a ~~recording~~ computer-readable medium, the method comprising:

reading menu management information, menu data and one or more playback units of video data from the ~~recording~~ computer-readable medium, the menu management information providing an index to menu data,

the menu data comprising one or more thumbnail pictures, each thumbnail picture corresponding to each playback unit, each thumbnail picture stored as a block of menu data on the recording medium; and

reproducing at least one thumbnail picture in the menu data based on the menu management information,

31. (Currently amended) A reproduction apparatus, comprising:

~~a driver configured to drive an optical pickup reproducing~~configured to read data device
~~to reproduce data recorded on the~~recording computer-readable medium; and

a controller configured to control the ~~driver optical pickup~~ to read a menu management information, menu data and one or more playback units of video data from the ~~recording computer-readable medium~~, the menu management information providing ~~an index information about~~ to menu data, the menu data comprising one or more thumbnail pictures corresponding to each playback units, ~~together and,~~ each thumbnail stored as a block of menu data on the computer-readable medium; and

a decoder configured to reproduce at least one thumbnail picture in the menu data based on the menu management information.

32. (Currently amended) A method of recording a data structure for managing reproduction of menu data recorded on a ~~recording computer-readable medium~~, the method comprising:

recording menu data in a menu data area of the ~~recording computer-readable medium~~, the menu data comprising one or more thumbnail pictures corresponding to each playback units, ~~together and~~ each thumbnail picture stored as a block of menu data on the recording medium;
and

recording menu management information in a menu management area of the ~~recording~~ computer-readable medium, the menu management information providing an index to each thumbnail picture in menu data,

wherein at least one thumbnail picture in the menu data is reproduced based on the menu management information.

33. (Currently Amended) A recording apparatus, comprising:

~~a driver configured to drive an optical pickup reproducing device to write data to the a~~
~~recording computer-readable~~ medium; and

a controller configured to control the ~~driver optical pickup~~ to write a menu management information, menu data and one or more playback units of video data to the ~~recording computer-readable~~ medium, the menu management information providing an index to menu data, the menu data comprising one or more thumbnail pictures corresponding to each playback units, ~~together and each thumbnail stored as a block of menu data~~ on the computer-readable medium,

wherein at least one thumbnail picture in the menu data is reproduced based on the menu management information.

34. (Currently Amended) The apparatus of claim 33, wherein the controller is configured to control recording the menu data in the menu data area, the menu data area comprising padding data between at least two of the blocks of menu data.

~~the menu data area comprises padding data between at least two of the blocks of menu data.~~

35. (Currently Amended) The apparatus of claim 33, wherein the controller is configured to control recording the menu management information, the menu management information

~~indicates~~indicating a number of the thumbnail pictures stored in the menu data area on the computer-readable medium.

36. (Currently Amended) The apparatus of claim 35, wherein the controller is configured to control recording the menu management information such that the menu management information provides a starting address and ending address of each block of menu data, and a number of starting and ending address pairs indicates the number of the thumbnail pictures stored in the menu data area.

37. (Currently Amended) The apparatus of claim 33, wherein the controller is configured to control recording the index to a thumbnail picture such that the index includes~~is~~ a starting address of the block of menu data for the thumbnail picture in the menu data area.

38. (Previously Presented) The method of claim 30, wherein the menu data area comprises padding data between at least two of the blocks of menu data.

39. (Previously Presented) The method of claim 30, wherein the menu management information indicates a number of the thumbnail pictures stored in the menu data area.

40. (Previously Presented) The method of claim 39, wherein the menu management information provides a starting address and ending address of each block of menu data, and a number of starting and ending address pairs indicates the number of the thumbnail pictures stored in the menu data area.

41. (Previously Presented) The method of claim 30, wherein the index to a thumbnail picture is a starting address of the block of menu data for the thumbnail picture in the menu data area.

42. (Currently Amended) The apparatus of claim 31, wherein the controller is configured to control reproducing the menu data from the menu data area, the menu data area ~~comprises~~ comprising padding data between at least two of the blocks of menu data.

43. (Currently Amended) The apparatus of claim 31, wherein the controller is configured to control reproducing menu management information, the menu management information indicates ~~indicating~~ a number of the thumbnail pictures stored in the menu data area.

44. (Currently Amended) The apparatus of claim 43, wherein the controller is configured to control reproducing menu management information, the menu management information provides providing a starting address and ending address of each block of menu data, and a number of starting and ending address pairs indicates the number of the thumbnail pictures stored in the menu data area.

45. (Currently Amended) The apparatus of claim 31, wherein the controller is configured to control reproducing index to a thumbnail picture, the index to a thumbnail picture including ~~is a~~ starting address of the block of menu data for the thumbnail picture in the menu data area.

46. (Previously Presented) The method of claim 32, wherein the menu data area comprises padding data between at least two of the blocks of menu data.

47. (Previously Presented) The method of claim 32, wherein the menu management information indicates a number of the thumbnail pictures stored in the menu data area.

48. (Previously Presented) The method of claim 47, wherein the menu management information provides a starting address and ending address of each block of menu data, and a number of starting and ending address pairs indicates the number of the thumbnail pictures stored in the menu data area.

49. (Previously Presented) The method of claim 32, wherein the index to a thumbnail picture is a starting address of the block of menu data for the thumbnail picture in the menu data area.

50. (New) The recording medium of claim 21, wherein the menu data area stores at least one thumbnail picture that is associated with a playback unit of video data recorded in a data area of the recording medium, and the menu data area records padding data between at least two of the blocks of menu data.

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END OF CLAIM LISTING